

(19) World Intellectual Property  
Organization  
International Bureau



25 MAR 2005

(43) International Publication Date  
8 April 2004 (08.04.2004)

PCT

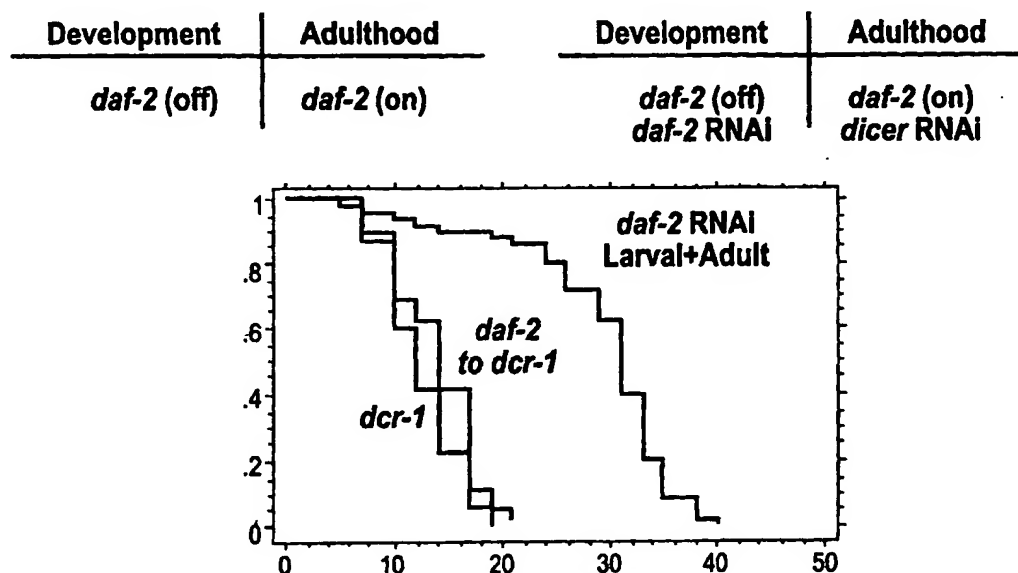
(10) International Publication Number  
**WO 2004/029215 A3**

- (51) International Patent Classification<sup>7</sup>: C12Q 1/68, A01N 43/04, C07H 21/04, A61K 31/07
- (21) International Application Number: PCT/US2003/030531
- (22) International Filing Date: 26 September 2003 (26.09.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 60/413,794 26 September 2002 (26.09.2002) US
- (71) Applicant (for all designated States except US): **THE REGENTS OF THE UNIVERSITY OF CALIFORNIA** [US/US]; 1111 Franklin Street, 12th Floor, Oakland, CA 94607 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **KENYON**, Cynthia [US/US]; 4366 25th Street, San Francisco, CA 94114 (US). **DILLIN**, Andrew [US/US]; 14582 Luna Media, San Diego, CA 92127 (US). **MURPHY**, Coleen [US/US]; 200 Irving Street, San Francisco, CA 94122 (US).
- (74) Agents: **PARENT**, Annette, S. et al.; Townsend and Townsend and Crew LLP, Two Embarcadero Center, 8th Floor, San Francisco, CA 94111 (US).
- (81) Designated States (*national*): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, EG, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK (utility model), SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: **CONDITIONAL GENE EXPRESSION USING RNAI**

**Does *daf-2* signaling during  
development regulate lifespan?**



(57) Abstract: The present invention relates to regulation of gene expression and conditional gene expression by regulating an RNAi response. More particularly, the present invention is directed to methods of inhibiting an RNAi response by contacting a cell with a dsRNA directed against a component of the RNAi response, *e.g.*, with a *dcr-1* dsRNA, thereby inhibiting an RNAi response.

WO 2004/029215 A3



**Declaration under Rule 4.17:**

— *of inventorship (Rule 4.17(iv)) for US only*

**Published:**

— *with international search report*

**(88) Date of publication of the international search report:**  
23 September 2004

**(15) Information about Correction:**

**Previous Correction:**

see PCT Gazette No. 23/2004 of 3 June 2004, Section II

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/30531

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : C12Q 1/68; A01N 43/04; C07H 21/04; A61K 31/07

US CL : 435/6, 91.1, 325, 375; 514/44, 2

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 435/6, 91.1, 325, 375; 514/44, 2

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X — Y	RUVKUN, G. Glimpses of a tiny RNA world. Science. 26 October 2001, Vol. 294, pages 797-799, see A, B, and C.	1, 2, 4, 5, 6, 8, 9, 10, 13-17, 20, 21, 22, 29-32, 43-48, and 51
X — Y	Tijsterman et al. RNA helicase MUT-14-dependent gene silencing triggered in <i>C. elegans</i> by short antisense RNAs. Science, 25 January 2002, Vol. 295, pages 694-697, see Figures 1 and 2.	1, 3, 4, 5, 6, 9, 10, 13, 15, 16, 17, 21, 22, 29, 31, 32, 34, 43, 44, 45, 47, and 48, 1, 13, 29, 44,
X — Y	US 6,506,559 B1 (FIRE et al.) 14 January 2003 (14.01.2003), see claims 1-22.	

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

## \* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search

07 June 2004 (07.06.2004)

Date of mailing of the international search report

02 JUL 2004

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Authorized officer

Terra C. Gibbs *Janice Fajal*  
Telephone No. (571) 272-1600 *for*

**INTERNATIONAL SEARCH REPORT**

PCT/US03/3

**Continuation of B. FIELDS SEARCHED Item 3:**

Databases: Medline, EmBase, CancerLit, Biosis,

search terms: dicer, dcr-1 rde-1, smg-5, ego-1, rde-4, siRNA, RNA interference